

NG, Kam Hung (伍淦鴻)

CURRICULUM VITAE

Personal particular

Name: Kam K.H. NG
Gender: Male
Email (Primary): kam.kh.ng@polyu.edu.hk
Email (Alt./c.c.): kam.kh.ng@gmail.com
Phone (Primary): (+852) 3400 8232
Origin: Hong Kong SAR, China
Citizenship: Hong Kong SAR, China
Office address (HK): R807, 8/F, R Core, AAE, The Hong Kong Polytechnic University, Hung Hom, Kowloon, HKSAR
ORCID: 0000-0002-4959-0502
Scopus ID: 57188646976
Researcher ID: L-7278-2019
ORCID weblink: <https://orcid.org/0000-0002-4959-0502>
WOS: <https://www.webofscience.com/wos/author/record/473924>
Scopus: <https://www.scopus.com/authid/detail.uri?authorId=57188646976>
Google Scholar: <https://scholar.google.com/citations?hl=zh-TW&user=vZiFMakAAAAJ>
ResearchGate: https://www.researchgate.net/profile/Kam_Kh_Ng
Academic profile: <https://www.polyu.edu.hk/aae/people/academic-staff/dr-ng-kam-hung/>

Education

2019 PhD (Air Traffic Management), The Hong Kong Polytechnic University
2015 BSc (Logistics Engineering and Management), 1st class honours, The Hong Kong Polytechnic University

Employment

Jul 2020 – Present Assistant Professor, Department of AAE, PolyU, HKSAR
Nov 2019 – Jul 2020 Research Fellow, School of EEE & School of MAE, NTU, Singapore
Oct, 2019 – Nov, 2019 Postdoctoral Fellow, Department of ISE, PolyU, HKSAR
Jul, 2019 – Oct, 2019 Research Assistant, Department of ISE, PolyU, HKSAR
Jun, 2018– Nov, 2018 Research Assistant, School of MAE, Nanyang Technological University, Singapore.

Research interests and expertise

- Air traffic control, air traffic flow management and aviation management
- Operations research and data-driven modelling
- Deep-learning in aviation meteorology and weather hazard prediction
- Urban traffic management in future urban air mobility
- Human factors and neuroergonomics in air traffic control and pilot training

Professional qualifications

- Hong Kong Airworthiness Course [AC055-2022-2 (RTC/2022/05)]
- Advanced Rating (over 7 kg and below 25 kg drone) and Standard Rating (below 7 kg drone), Remote Pilot Certificate, Small Unmanned Aircraft order (Cap. 448G), The Hong Kong Civil Aviation Department. (22-01-2025 to 22-01-2028)

Achievements

Scholars Ranked World's Top 2% Scientists in 2022 according to a recent index compiled by Stanford University

Teaching

Teaching activities

Introduction to Aviation System and Air Transport Regulation (AAE2004, 2022/23 - present)
Introduction to Aviation Industry (AA1BN01V, 2022/23 – present)
Mitigating the STEM Divide through Providing Early Aviation Experiences to Youths (AAE3S01, 2022/23 – present)
Air Transport Operations (AAE3007, 2020/21 – 2021/22)
Air Traffic Management and Airport Operations (AAE3012, 2020/21 – 2021/22)
Airport Services Engineering (AAE4003, 2020/21 – 2021/22)
Data Science and Data-driven Optimisation in Airline and Airport Operations (AAE4009, 2021/22)

Services

Faculty services

RI/RC/University level

Founding member, Research Centre on Unmanned Autonomous Systems (RC-UAS) (2021/22 – present)
Founding member, Research Centre on Data Science and Artificial Intelligence (RC-DSAI) (2021/22 – present)
Associate Fellow, Institute for Higher Education Research & Development (IHERD) (2023/24 – present)

Faculty/Department

Departmental Teaching and Learning Committee (DLTC)/Departmental Undergraduate Programmes Committee (DUPC)/Departmental Research Committee (DRC)

Chairman, DLTC (2022/23 – Present)
Committee member, DLTC (2020/21 – 2021/22)
Chairman, DUPC (2022/23 – present)
Committee member, DUPC (2020/21 – 2021/22)
Committee member, DRC (2021/22 – Present)

Academic programmes

Scheme leader, B.Eng. (Hons) Scheme in Aviation Engineering (2022/23 – Present)
Programme leader, B.Eng. (Hons) in Air Transport Engineering (ATE) (2021/22)
Deputy programme leader, B.Eng. (Hons) in Aviation Engineering (2020/21)

Student admission

Departmental enrolment liaison officer (DELO) (2022/23 – 2023/24)
Deputy departmental enrolment liaison officers (Deputy DELO) (2020/21)

Others

Deputy leader, Aviation Research Consortium (ARC) (2021/22 – Present)
Team leader, Human Factors and Ergonomics Laboratory (2020/21 – Present)
Committee member, Board of examiners (BoE) (2020/21 – Present)

Professional affiliations and community services

Co-opt member, Aircraft Division Committee, The Hong Kong Institution of Engineers (2023/24 – present)
Chairman, Manufacturing and Industrial Engineering Section, IET Hong Kong (2022/23 – 2023/24)
Treasurer, Manufacturing and Industrial Engineering Section, IET Hong Kong (2021/22 – 2022/23)
Committee member, Manufacturing and Industrial Engineering Section, IET Hong Kong (2017/18 – 2021/22)
Co-opt member, Manufacturing and Industrial Engineering Section, IET Hong Kong (2016/17 – 2017/2018)

Membership

Corporate Member, Hong Kong Aviation Industry Association (HKAIA) (2025/26 – present)

Civilian Instructor, Hong Kong Air Cadet Corps (HKACC) (2021/22 – present)

Fellow, Hong Kong Meteorological Society (HKMetS) (2022/23 – present)

Member, The Royal Meteorological Society (RMetS) (2022/23 – present)

Member, The Royal Aeronautical Society (RAeS) (2022/23 – present)

Member, The American Institute of Aeronautics and Astronautics (AIAA) (2021/22 – present)

Member, The Institution of Engineering and Technology (IET) (2016/17 – present)

Member, The Institution of Electrical and Electronics Engineers (IEEE) (2015/16 – present)

Corporate Member, the Hong Kong Society for Transportation Studies (HKSTS) (2022/23 – present)

Associate Member, The Hong Kong Ergonomics Society (2023/24 – present)

Grants

(Total amount: approx. \$28,000,000.00)

Teaching and learning related grants (Cumulative amount: \$904,945.50)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Aviation Professional Certificate Programme, Funding for Development of Professional Certificate on edX, Educational Development Centre, HK \$425,000 (1st Nov 2023 – 31st Oct 2024, PI, SPF23-24/MOOC-PC/AAE01, 8CU3)

Massive open online course (MOOC) project: Introduction to air transportation and aviation management, Educational Development Centre, HK \$369,945.50 (1st Jun 2021 – 31st May 2023, PI, SPF20-21/MOOC/AAE, 8CQM)

Human factors workshop 2021: taking-off from aviation education, Seed Fund for Innovating Internationalisation at Home Strategies, Educational Development Centre, HK \$110,000.00 (28th Feb 2021 – 28th Feb 2022, PI, 49JZ)

Large Equipment Fund for teaching (Cumulative amount: \$1,950,000.00)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Upgrading the existing A320 flight simulator with the next generation radar simulation and airport collaborative decision making (A-CDM) modules, Large Equipment Fund for teaching, HK \$960,000.00 (1st Aug 2024 – 31st Jul 2025, PI, PC8T)

Live, historical, and pseudo weather enhancement module cum high fidelity flight emergency operational advisory aids for the existing A320 flight simulator, Large Equipment Fund for teaching, HK \$990,000.00 (1st Jul 2022 – 30th Jun 2023, PI, BC79)

Undergraduate Research and Innovation Scheme (URIS)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Optimising Last-Mile Delivery Network: Locker-Drone Logistics System Planning under Uncertain Environments, Undergraduate Research and Innovation Scheme 2024/25, \$30,000.00 (1st Sep 2024 – 30th Aug 2026, Supervisor)

Enhanced Multi-Aircraft Fast Trajectory Optimisation Regarding Deep Reinforcement Method Under Dynamic Weather Hazards Situation, Undergraduate Research and Innovation Scheme 2024/25, \$30,000.00 (1st Sep 2024 – 30th Aug 2026, Supervisor)

Examine the possibility to replace pilot monitoring by importing audio to AR glasses using Microsoft HoloLens in Single Pilot Operations, Undergraduate Research and Innovation Scheme 2022/23, PolyU, \$30,000.00 (1st Sep 2022 – 31st Aug 2023, Supervisor, TAC1)

Neuroergonomic-based pilots' performance monitoring under the aid of autopilot, Undergraduate Research and Innovation Scheme 2022/23, PolyU, \$30,000.00 (1st Sep 2022 – 31st Aug 2023, Supervisor, TACB)

Examining collaborative decisions between air traffic controllers and pilots in terminal manoeuvring operations, Undergraduate Research and Innovation Scheme 2021/22, PolyU, \$30,000.00 (1st Sep 2022 – 31st Aug 2023, Supervisor, TA20)

RGC research grants (Cumulative amount: \$2,071,451.00)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Spatio-temporal meteorological hazards avoidance through flight trajectory planning for safe and efficient air traffic management, General Research Fund 2024, Research Grants Council, HK \$1,132,781.00 (1st Jan 2024 – 31st Dec 2026, PI, PolyU15201423/QC1R)

Towards solution robustness and network resilience of the terminal traffic flow and terminal airspace congestion control, Early Career Scheme 2022, Research Grants Council, \$938,670.00 (1st Jan 2022 – 31st Dec 2025, PI, PolyU25218321, PP7E)

Non-RGC external research grants (Cumulative amount: \$17,567,498.56)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Development of human-centric driver support systems and training recommendations for safer cross-border driving during Northbound Travel for Hong Kong Vehicles, Smart Traffic Fund, Transport Department, HK \$7,703,151.61 (1st Nov 2024 - 31st Jul 2026, PI, PSRI/85/2403/RA, ZB8Q)

Dynamic wake separation modelling in runway scheduling problem and optimisation methods in terminal manoeuvring areas, The Young Scientists Fund 2024, National Natural Science Foundation of China, RMB \$300,000.00 (1st Jan 2024 – 31st Dec 2026, PI, 72301229, ZGK3)

Investigation of an online data-driven intelligent automation platform for drivers considering the psychological condition instability and behaviours for a sustainable and safe transportation system, Smart Traffic Fund, Transport Department, HK \$5,544,700.15 (1st Sep 2022 – 30th Aug 2024, PI, PSRI/03/2108/PR, ZB3E)

Unlocking the potential of AI edge intelligence and cloud-edge computing for flexible robotic and facility control system, Innovation and Technology Fund – Partnership Research Programme (ITF-PRP), Innovation and Technology Commission, HK \$3,999,966.80 (2nd Jul 2021 – 31st Oct 2023, PI, PRP/102/20FX, ZM3C)

Internal research grants (Cumulative amount: \$2,650,000.00)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Aircraft induced contrail mitigation strategy by satellite imagery and uncertainty modelling for the future of airspace management, Joint Research Fund supported by RISUD 2023/24, Research Institute for Sustainable Urban Development, HK \$1,200,000.00 (1st Sep 2024 – 31st Aug 2026, PI, BBG5)

Towards future climate friendly airspace design: A deep-learning approach for aircraft induced contrails recognition from satellite image and climate-optimised air traffic routing, Research Funding Scheme for Supporting Intra-Faculty Interdisciplinary Projects 2023/24, PolyU Faculty of Engineering, HK \$500,000.00 (1st Jun 2024 – 31st May 2025, PI, WZ8D)

UAV-based Inspection of Aircraft with Deep learning-based visual inspection system, Research Centre for Unmanned Autonomous Systems, HK \$500,000.00 (1st Feb 2024 – 31st Jan 2026, PI, CE1W)

Using neuro-physiological data in realising the human-centred intelligence in the air transportation systems of single-pilot operation, Research centre for Data Sciences and Artificial Intelligence, HK \$400,000.00 (1st Jun 2024 – 31st Dec 2026, PI, CE1G)

Data-driven and feedback-loop hyper-heuristics in an online flight trajectory prediction, Departmental General Research Fund, HK \$50,000 (1st Jun 2021 – 30th Nov 2022, PI, UALL)

Start-up grants for new recruits (Cumulative amount: \$1,050,000.00)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

The impacts of longitudinal separation, efficiency loss and cruise speed adjustment in robust terminal traffic flow problem under uncertainty, Start-up grant, HK \$550,000.00 (1st Oct 2020 – 30th Sep 2023, PI, BE3V)

Effects of interaction factors in human-machine interface, human factors and ergonomic and cognitive modelling in air traffic control environment, Start-up grant, HK \$500,000.00 (1st Oct 2020 – 30th Sep 2023, PI, ZVS9)

Consultancy (research related) (Cumulative amount: \$1,439,999.00)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Provision of Design, Development, Supply and Implementation of Swift Airborne Search System for Rescue Operations for the Government Flying Service, HK \$999,999 (TBC, PI, TBC)
RFID-enabled tool tracking toolbox system for helicopter maintenance, Government Flying Services, HK \$440,000.00 (22nd Sep 2023 – 21st Aug 2024, PI, CA23-00065)

Consultancy (project related) (Cumulative amount: \$423,800.00)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Enhancement of Proximity Payment System for Smart City Parking System with Business Intelligence and Resilience, Sino Parking Services Limited, HK \$423,800.00 (1st Aug 2024 – 31st Dec 2024, PI, CA24-00014)

Consultancy (teaching related) (Cumulative amount: \$46,620.00)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Teaching Service for Fly My Way Exchange Programme 2023, The Hong Kong International Aviation Academy (HKIAA), HK \$46,620.00 (29th Jun 2023, PI, CA22-00271)

Others (Cumulative amount: \$40,000.00)

Grant title, funding agent, amount (project start date – project end date, role, [project code, if any])

Seminar grants, Mainland-Hong Kong University alliances activity 2021 – 2022, Shanghai-Hong Kong University Alliance, \$40,000.00 (1st Jul 2021 – 30th Jun 2024, PI, 89SX)

Research team

RPg supervision: Graduated

Name of the candidate, Degree, Thesis title, Years of graduation, [scholarship award, if any]

Dr Nana CHU, Ph.D. (RJ8N), Research on Improving Terminal Traffic Flow Efficiency and Airport Capacity Through Data-Driven and Deep Learning-Based Dynamic Aircraft Wake Separation Prediction. 2024/25. (PolyU UPSF 3+1 competitive awardee)

Dr Chenliang ZHANG, Ph.D. (RJ85). Enhancing Efficiency in Airside Operations through Prescriptive Analytics. 2024/25.

Dr Qinbiao LI, Ph.D. (RH1W), Enhancing Flight Operations Safety: A Neurophysiological Approach to Mental State Prediction in Commercial Single-Pilot Operations, 2023/24.

RPg supervision: On-going (full-time)

Name of the candidate, Degree, Thesis title, Years of academic studies, [scholarship award, if any]

Mr Dave, Yin Yuen CHAN, Ph.D. candidate (RJ1D), Unmanned aerial vehicles systems for supporting airport safety and operations, 2021/22 – 2024/25.

Ms Ye LIU, Ph.D. candidate (RJ78), Research on interactive real-time airspace prediction models under various meteorological scenarios in air traffic management, 2022/23 – 2025/26, PolyU RGC Project 2+1 incentive awardee.

Mr James, Cho Yin YIU, Ph.D. candidate (RLPA), Harmonising adaptive automation and deep learning with neuroergonomics for human-automation teaming in flight operations, 2022/23 – 2025/26, Hong Kong PhD Fellowship Scheme awardee.

Mr Yipeng ZHU, Ph.D. candidate (RJCX), Resilience-oriented assessment and optimization of air traffic network considering disruptive modes, 2022/23 – 2025/26.

Mr Zhongyi JIN, Ph.D. candidate (RJJ9), Drone-supported last-mile humanitarian logistics planning under uncertainty: models, methods, and applications, 2022/23 – 2024/25, PolyU UPSF 3+1 competitive awardee.

Ms Xin YUAN, Ph.D. candidate (RXX2), Exploring the Human-Centric Interaction Paradigm: Augmented Reality-Assisted Head-Up Display Design for Collaborative Human-Machine Interface in Cockpit, 2022/23 – 2024/25.

Mr Congcong DU, Ph.D. student (RKR9), Airline Management and sustainable aviation management, 2023/24 – 2026/27, PolyU UPSF 3+1 incentive awardee.

Mr Changxin ZHU, Ph.D. student (RMBU), Trajectory optimisation under Weather Hazards in Air Traffic Control: A Multi-Objective Algorithm for Fuel Consumption and Pollutant Emission, 2023/24 – 2027/28, PolyU UPSF 3+1 incentive awardee.

Mr Rong TANG, Ph.D. student (RMK1), Predicting contrails and mitigating the climate impact via trajectory optimisation for sustainable air transportation, 2023/24 – 2026/27, PolyU UPSF 3+1 competitive awardee.

Mr Qinyu ZHOU, Ph.D. student (TBC), Research on the Mechanisms and Detection Methods of Acute Stress Responses During Flight Training, 2024/25 – 2026/27.

Ms Yuanyuan BU, Ph.D. Student (TBC), Development of human-centric driver support systems for safer adaptation in cross-border driving, 2024/25 – 2027/28.

Mr Terrence, Tsz Chun YEUNG, M.Phil. candidate (RJTT), A Stochastic Optimisation Approach to Air Traffic Flow Management under the Effects of Weather, 2022/23 – 2024/25.

RPg supervision: On-going (part-time)

Name of the candidate, Degree, Thesis title, Years of academic studies, [scholarship award, if any]

Ms Senna YAO, Ph.D. student (RJ75), Research on the balance of airline operation integrity and cost saving regarding to flight disruption driven by modelling from scheduling, crew pairing and network routing, 2021/22 – 2029/30.

Mr Alan, Tsz Kin TAM, M.Phil. candidate (RJ7V), Research on data-driven application in relative time-based short term flight trajectory prediction, 2021/22 – 2025/26.

Supervision of Research Fellow, Postdoctoral Fellow, Research Associate, Research Assistant

Name of the candidate, Job title, Duration of services.

Full-time staff

Dr Yichen QIN, Postdoctoral Fellow, Aug 2021 - Jul 2022
Mr Dave, Yin Yuen CHAN, Project Associate, Jul 2021 - Aug 2021
Ms Sze Ting TAY, Project Associate, Jul 2021 - Jun 2023, Project Technical Assistant, Jul 2023 - Aug 2023
Mr Chenliang ZHANG, Project Associate, Dec 2021 - Oct 2023
Ms Sophia, Wai Shan TAI, Project Assistant, Oct 2020 - Jan 2022
Ms Rainie, Ho Ying LEE, Project Assistant, Jul 2021 - Aug 2021 & Jan 2022 - May 2022
Mr Rodney, Chak Ming CHAN, Project Assistant, Jun 2022 - Jun 2023, Project Technical Assistant, Jul 2023 - Oct 2023
Mr Mike, Man Chun CHENG, Project Assistant, Sep 2021 - Nov 2022
Mr Savio, Chun Wah YU, Project Assistant, Jul 2021 - Dec 2021 & Dec 2022 - Oct 2023
Mr James, Cho Yin YIU, Project Assistant, Jul 2022 - Aug 2022, Student Assistant, Jun 2021 - Aug 2021
Mr Terrence, Tsz Chun YEUNG, Project Assistant, Jul 2022 - Aug 2023
Mr Dickson, Chun Kiu SO, Project Assistant, Jul 2022 - Oct 2023
Dr Wei WU, Project Assistant, Jan 2024 - Oct 2024
Mr Ka Ho CHAN, Project Technical Assistant, Mar 2022 - Oct 2023
Mr Ting Hin HO, Project Technical Assistant, Sep 2022 - Jun 2023
Mr Parco Pak Ho CHAN, Intern, Jun 2022 - Aug 2022

Part-time staff

Dr Qinbiao LI, Postdoctoral Fellow, Aug 2024 - On-going, Project Associate, Jan 2024 - Aug 2024
Mr Dave, Yin Yuen CHAN, Project Associate, Apr 2021 - Jul 2021
Ms Sze Ting TAY, Project Associate, Apr 2021 - Jun 2021
Ms Lai Ching KWAN, Project Associate, Sep 2021 - Sep 2022
Mr Burly, K. TAN, Project Associate, Sep 2024 - On-going
Mr Gabriel, Yat Hei LEE, Project Associate, Sep 2024 - On-going
Mr Billy, Hei Chi LEUNG, Project Assistant, Sep 2022 - May 2023, Project Technical Assistant, Jun 2023 - Jun 2024
Mr Savio Chun Wah YU, Project Assistant, Apr 2022 - May 2022 & Sep 2022 - Dec 2022
Mr Alan, Tsz Kin TAM, Project Assistant, Sep 2021 - Jan 2022, Project Technical Assistant, Jan 2023 - May 2023, Student Assistant, Dec 2020 - May 2021
Mr James, Cho Yin YIU, Student Assistant, Feb 2021 - May 2021 & Sep 2021 - Jun 2022
Ms Ellen Siu Tung CHU, Student Assistant, Feb 2021 - Mar 2021 & Jan 2022 - Aug 2022
Mr Ho Kwan CHONG, Student Assistant, Jun 2021 - Aug 2021
Mr Jason, Chi Hang LEUNG, Student Assistant, Jun 2021 - Jul 2022
Mr Nelson, Chun Ting CHOW, Student Assistant, Sep 2021 - Dec 2021
Mr Alvin, Ka Yeung WONG, Student Assistant, Sep 2021 - Dec 2021 & Sep 2022 - Dec 2022
Mr Norman, Man Nok WONG, Student Assistant, Jul 2021 - Dec 2021 & May 2022 - Dec 2022 & Feb 2023 - Mar 2023 & Aug 2023 - Oct 2023 & Dec 2023 - Jul 2024
Mr Parco, Pak Ho CHAN, Student Assistant, Feb 2023 - Apr 2023 & Jul 2023 - Aug 2024
Mr Ho Ki CHIU, Student Assistant, Aug 2023 - Dec 2023
Mr Kenneth, Pak Leung CHAN, Student Assistant, Aug 2023 - Aug 2024
Mr Yunxiang SHU, Student Assistant, Feb 2024 - Nov 2024
Mr Wilson, Pak Shing CHENG, Student Assistant, May 2024 - Aug 2024
Mr Wayan Wai Hang CHENG, Student Assistant, May 2024 - Aug 2024
Ms Gigi, Wing Chi TONG, Student Assistant, May 2024 - Aug 2024
Mr Benjamin, Wang Ngai WONG, Student Assistant, May 2024 - Aug 2024
Ms Anson, Cheuk Lam YAN, Student Assistant, May 2024 - Aug 2024 & Oct 2024 - On-going (Projected)
Mr Oscar, Haowen LIANG, Student Assistant, Oct 2024 - On-going (Projected)

Awards

Achievement

Faculty Merit Award in Teaching: Outstanding Young Teacher (Individual) 2024, PolyU FENG

Faculty of Engineering Research Grant Achievement Award 2022, PolyU FENG

Faculty Merit Award in Research (Research & Scholarly Activities – Outstanding Young Researcher),
Faculty Awards for Outstanding Achievement 2021, PolyU FENG

RPg research award – international level

Authors (Year Month), Research/Paper/Abstract title, Award title, Conference name/event name, Location: publisher.

Chu, N., Ng, K. K. H., Liu, Y., & Hon, K. K. (2024 Jul). Analysing the Potential of Dynamic Aircraft Wake Separation via Data-Driven Aircraft Wake Region Detection. *Best Student Award in Air Transportation Systems. AIAA Aviation Forum and Ascend 2024*. Las Vegas, Nevada, U.S: AIAA.

Li, Q, Yiu, C. Y., Yu, S. C. M., & Ng, K. K. H. (2021, Dec). Situational Awareness and Flight Approach Phase Event Recognition Based on Psychophysiological Measurements. *The Outstanding Paper Award That Earned Honourable Mention, the 2021 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*. Singapore, Singapore: IEEE.

RPg research award – regional/local level

Authors (Year Month). Research/Paper/Abstract title, Award title, Conference name/event/competition name, Location: publisher.

Li, Q., & Ng, K. K. H. (2024 Jul). Enhancing Flight Operations Safety: A Neurophysiological Approach to Mental State Prediction in Commercial Single-Pilot Operations. *Champion Award of Doctorate Degree group, HKIE Safety Specialist Committee – Student Project Competition 2024*. Hong Kong: HKIE.

Chan, Y. Y., & Ng, K. K. H. (2023 Nov). Urban level energy efficient UAV path planning in windy environments. *Champion (postgraduate level), HKIE CA paper competition 2022/23, HKIE Control, Automation & Instrumentation Division*, Hong Kong: HKIE.

Yiu, C. Y., & Ng, K. K. H. (2023 May). Towards safe and collaborative aerodrome operations: Assessing shared situational awareness for adverse weather detection with EEG-enables Bayesian neural networks. *Best Student Papers Award 2022. HKIE Logistics and Transportation Division*, Hong Kong: HKIE.

Li, Q., & Ng, K. K. H. (2021 Nov). Design and evaluation of human factors assessment and conflict detection performance in a terminal air traffic control. *HKIE CA paper competition 2021/22, HKIE Control, Automation & Instrumentation Division*, Hong Kong: HKIE.

UG research award – regional/local level

Authors (Year Month). Research/Paper/Abstract title, Award title, Conference name/event/competition name, Location: publisher.

Chong, M. H., Lam, H. S., Yiu, C.Y., & Ng, K. K. H. (2022 Jul). Towards safe and collaborative aerodrome operations: Assessing shared situational awareness for adverse weather detection with EEG-enables Bayesian neural networks. *ASM outstanding award, ASM technology award 2022*. Hong Kong.

Chong, M. H., Lam, H. S., Yiu, C.Y., & Ng, K. K. H. (2022 Jul). EEG-based shared situational awareness assessment of aerodrome operations under meteorological conditions and communication protocol variations. *HKIE CA paper competition 2021/22, HKIE Control, Automation & Instrumentation Division*, Hong Kong: HKIE.

Kwok, K. C., Lee, W.T., Mo, H. T., & Ng, K. K. H. (2021 Jul). Study of flight arrival and departure delay and causal factors using machine learning approach. *Champion, HKIE CA paper competition 2020/21, HKIE Control, Automation & Instrumentation Division, Hong Kong: HKIE*.

Tsang, K. Y., & Ng, K. K. H. (2020 Jul). Blockchain-based system for aircraft parts traceability and condition tracking. *Best Student Papers Award 2020. HKIE Logistics and Transportation Division*, Hong Kong: HKIE.

Seminar/Talk/Lecture

Invited keynote/public lecture by Prof. Ng

Topic, Organisation, Country, Date

Public lecture on “Soaring into the Bluer Sky: Climate Change and Green Aviation”, RGC Public Lectures - Innovative Future: Smart Living and Green Aviation, 19th Oct 2024.

Invited research seminar/talk/lecture

Topic, Organisation, Country, Date.

Research seminar on “Single pilot operations”, Southwest Jiaotong University, Chengdu, China, 7th Jan 2025.

Research seminar on “Advanced data-driven integrated arrival optimisation in the terminal manoeuvring area leveraging intelligent dynamic wake separation prediction”, The University of Hong Kong, HKSAR, 12th Dec 2024.

Research seminar on “Towards dynamic wake separation: A hybrid attention-based deep learning framework for spatial-temporal wake vortex and wake decay prediction”, Civil Aviation University of China, Tianji, China, 14th Oct 2024.

Research seminar on “Recent advancement in air traffic management”, Ecole Nationale de l'Aviation Civile, Toulouse, France, 6th Jul 2024.

Research seminar on “Deep-learning wake vortices decay prediction and dynamic aircraft wake separation”, AIAA Air Transportation Systems, USA, 6th Jun 2024.

Research seminar on “Single pilot operations & advanced AR-HUD”, Nanyang Technological University, Singapore, Singapore, 30th May 2024.

Research seminar on “Spatial-temporal modelling of air traffic network resilience enhancement in response to propagation outbreaks”, National University of Singapore, Singapore, Singapore, 29th May 2024.

Research seminar on “A study on uncertainty modelling on drone-supported relief facility location and humanitarian last-mile logistics systems planning”, Shanghai Maritime University, Shanghai, China, 25th Apr 2024.

Research seminar on “Dynamic wake decay prediction”, North-western Polytechnical University, Jiangsu, China, 24th Apr 2024.

Invited talk on “The state-of-the-art air traffic research and aviation meteorology”, COMAC test flight centre, Shanghai, China, 28th Mar 2024.

Research seminar on “Towards future air mobility: Joint optimisation of infrastructure deployment and eVTOL fleet operations for urban air mobility systems considering spatial equity”, Shanghai University, China, 27th Dec 2023.

Research seminar on “Advancing commercial single-pilot operation safety from a human-centred perspective”, Shanghai Jiao Tong University, China, 25th Dec 2023.

Research seminar on “Understanding the potential of time-based flight operations”, Chang’an University, Chang’an, China, 24th Nov 2022.

Research seminar on “Towards green and sustainable aviation through efficient and emission-wise flight trajectory planning”, The 22nd COTA international conference on Transportation Professionals, the 22nd Chinese overseas transportation association (COTA), Beijing, China, 9th Jul 2022.

Invited talk on “Roadmap to the time-based flow management and flight trajectory modelling”, UNSW-PolyU virtual workshop, Co-hosted by UNSW Sydney and PolyU, Australia and Hong Kong, 2nd Mar 2022.

Seminar on “Dealing with the Uncertainty in Safe and Robust Airside Operations”, The Hong Kong Polytechnic University, HKSAR, 20th Dec 2021.

Invited industrial seminar/talk/lecture

Topic, Organisation, Country, Date.

Panel discussion on “Low altitude economy”, IET wireless symposium 2024, IET HK, HKSAR, 23rd Aug 2024.

Industrial seminar on “Human factors towards safety hazard and just culture”, Airport Authority of Hong Kong, HKSAR, 11th Jan 2024.

Panel discussion on “sharing on Smart and Green Living”, Business Expands Easy (BEE) launching ceremony, Hong Kong Productivity Council, Hong Kong, 16th Sep 2022.

Webinar of Smart Traffic Fund, Transport Department, Hong Kong Productivity Council, Hong Kong, 21st Feb 2022.

Seminars/Talk/Lecture arranged by Prof. Ng

Topic, Organisation, Country, Date.

Research seminar on “Vertiport Human-Automation Teaming for eVTOL Departure and Arrival Management” by Prof. Wei Peng, Associate Professor, Department of Mechanical and Aerospace Engineering, George Washington University, 28th Feb 2025.

Research seminar on “Autonomous Systems in Aviation” by Prof. Gabriel LODEWIJKS, Professor, School of Engineering, The University of Newcastle, Australia, 28th Feb 2025.

Research seminar on “Solving Aircraft Routing Optimisation Model with Operational Research and Deep Learning Methods”, by Prof. Cheng-Lung (Richard) WU, Associate Professor, School of Aviation, The University of New South Wales, 21st Jan 2025.

Research seminar on “The development of a scenario-based human-machine-environment-procedure (HMEP) the classification scheme for the root cause analysis of aviation accidents” by Prof. Chia-Fen Chi, Distinguish Professor, National Taiwan University of Science and Technology, 13th May 2024.

Research seminar on “Maintenance Capability Enhancement and Service Optimisation Under MRO Outsourcing Mode” by Dr Jason Y. Qin, Assistant Professor, School of Economics and Management, Shanghai Maritime University, China, 11th Apr 2022.

Research seminar on “Operational risk in airline crew scheduling: do features of flight delays matter?” by Dr Xuting Sun, Associate Professor, SILC Business School, Shanghai University, Shanghai, China, 18th Jan 2022.

Industrial seminar arranged by Dr Ng

Topic, Organisation, Location, Country, Date.

Industrial seminar on “Roadmap to a chartered engineer status and its international agreements across countries” Ir Ben Li, IET membership drive coordinator & Ir W.C. Cheung HKIE, co-hosted by IET, HKIE and PolyU, 24 Apr 2023

Industrial seminar on “Professional in engineering development through IET and ethics for engineers” by Ir Ben Li, IET membership drive coordinator, co-hosted by IET and PolyU, 7 Apr 2022

Patent

Patent title, Patent ID, registration country, date.

Precise Localisation Calibration System for Autonomous Mobile Robot based on Reflector-Feature Landmark, CN216913853U, mainland China, 8th Jul 2022.

Media

Ng, K. K. H. (2024, Jun 19). Hong Kong aviation authorities took 24 minutes to tell planes of emergency runway closure. *SCMP*, Hong Kong. <https://www.scmp.com/news/hong-kong/transport/article/3267282/hong-kong-aviation-authorities-took-24-minutes-tell-planes-emergency-runway-closure>

Ng, K. K. H. (2024, Jun 18). Hong Kong airport urged to review contingency plans after 8-hour runway closure. *SCMP*, Hong Kong. <https://www.scmp.com/news/hong-kong/transport/article/3266999/hong-kong-airport-urged-review-contingency-plans-after-8-hour-runway-closure>

- Ng, K. K. H. (2024, May 21). Singapore Airlines Plane Plummets 1,830 Meters, Causing Panic; Experts Suspect Rare Clear-Air Turbulence. (Chinese title: 新加坡航空客機急墜 1830 米變嚇親 學者料晴空湍流:歷史罕見). *HK01*, Hong Kong.
<https://www.hk01.com/%E7%A4%BE%E6%9C%83%E6%96%B0%E8%81%9E/1021643/%E6%96%B0%E5%8A%A0%E5%9D%A1%E8%88%AA%E7%A9%BA%E5%AE%A2%E6%A9%9F%E6%80%A5%E5%A2%9C1830%E7%B1%B3%E8%AE%8A%E5%9A%87%E6%A9%9F-%E5%AD%B8%E8%80%85%E6%96%99%E6%99%B4%E7%A9%BA%E6%B9%8D%E6%B5%81-%E6%AD%B7%E5%8F%B2%E7%BD%95%E8%A6%8B>
- Ng, K. K. H. (2024, Jan 3). Commercial Aircraft Must Pass 90-Second Evacuation Test; Experts Emphasize the Importance of Passenger Cooperation During Emergencies (Chinese title: 民航機設計均須通過全機 90 秒內疏散測試 學者指逃生時乘客配合非常重要). *TVB News*, Hong Kong.
<https://news.tvb.com/tc/world/6595376760d4674427007427/%E5%9C%8B%E9%9A%9B-%E6%B0%91%E8%88%AA%E6%A9%9F%E8%A8%AD%E8%A8%88%E5%9D%87%E9%A0%88%E9%80%9A%E9%81%8E%E5%85%A8%E6%A9%9F90%E7%A7%92%E5%85%A7%E7%96%8F%E6%95%A3%E6%B8%AC%E8%A9%A6-%E5%AD%B8%E8%80%85%E6%8C%87%E9%80%83%E7%94%9F%E6%99%82%E4%B9%98%E5%AE%A2%E9%85%8D%E5%90%88%E9%9D%9E%E5%B8%B8%E9%87%8D%E8%A6%81>
- Ng, K. K. H. (2023, Jun 25). Cathay Pacific Plane Experiences Malfunction During Hong Kong Takeoff, Emergency Evacuation Results in 11 Injuries. (Chinese title: 國泰客機香港起飛故障 緊急疏散 11 傷). *udn News*, Taiwan. <https://udn.com/news/story/7331/7256661>
- Ng, K. K. H. (2023, Jun 25). Cathay Pacific Plane Malfunctions Before Takeoff; Pilot's Quick Action Prevents Disaster. (Chinese title: 國泰客機升空前故障 機師急剎免空難). *Wen Wei Po*, Hong Kong. <https://www.wenweipo.com/a/202306/25/AP64974dd8e4b043f3863719bc.html>
- Ng, K. K. H. (2023, Jun 25). Feature: Techniques for Using Emergency Slides to Prevent Injuries and 'Human Pile-Ups' (Chinese title: 特稿：瀧逃生梯有技巧 防止受傷「人疊人」). *Wen Wei Po*, Hong Kong.
<https://www.wenweipo.com/a/202306/25/AP64974db4e4b043f3863719b6.html>
- Ng, K. K. H. (2023, Jun 25). Anomalies Detected Quickly; Experts Praise Pilot's Professional Response. (Chinese title: 短時間內發現異常 專家指機師反應專業). *Singtao Daily*, Hong Kong. <https://std.stheadline.com/daily/article/2535085/%E6%97%A5%E5%A0%B1-%E6%B8%AF%E8%81%9E-%E7%9F%AD%E6%99%82%E9%96%93%E5%85%A7%E7%99%BC%E7%8F%BE%E7%95%B0%E5%B8%B8-%E5%B0%88%E5%AE%B6%E6%8C%87%E6%A9%9F%E5%B8%AB%E5%8F%8D%E6%87%89%E5%B0%88%E6%A5%AD>
- Ng, K. K. H. (2023, Jun 25). Inconsistent Speed Measurement - Cathay Pacific Flight Aborts Takeoff - Company Apologises as Civil Aviation Department Investigates - Experts Stress Importance of Accurate Airspeed, Leading to Aborted Takeoff. (Chinese title: 測速系統不一致-國泰航機煞停起飛-公司致歉民航處調查-專家-掌握空速非常重要故須煞). *Mingpao*, Hong Kong.
<https://news.mingpao.com/pns/%E6%B8%AF%E8%81%9E/article/20230625/s00002/1687631806430/%E6%B8%AC%E9%80%9F%E7%B3%BB%E7%B5%B1%E4%B8%8D%E4%B8%80%E8%87%B4-%E5%9C%8B%E6%B3%B0%E8%88%AA%E6%A9%9F%E7%85%9E%E5%81%9C%E8%B5%B7%E9%A3%9B-%E5%85%AC%E5%8F%B8%E8%87%B4%E6%AD%89%E6%B0%91%E8%88%AA%E8%99%95%E8%AA%BF%E6%9F%A5-%E5%B0%88%E5%AE%B6-%E6%8E%8C%E6%8F%A1%E7%A9%BA%E9%80%9F%E9%9D%9E%E5%B8%B8%E9%87%8D%E8%A6%81%E6%95%85%E9%A0%88%E7%85%9E>

- Ng, K. K. H. (2023, Jun 25). Expert highlights potential danger as Cathay Pacific plane experiences malfunction, but pilot's quick thinking prevents disaster Rejected Takeoff. *Dimsum Daily*, Hong Kong. <https://www.dimsumdaily.hk/expert-highlights-potential-danger-as-cathay-pacific-plane-experiences-malfunction-but-pilots-quick-thinking-prevents-disaster/>
- Ng, K. K. H. (2023, Jun 25). Expert: Captain's Professional Judgment Prevented Serious Accident. (Chinese title: 專家：機長判斷專業 避免嚴重意外). *Oriental Daily*, Hong Kong. https://orientaldaily.on.cc/content/%E8%A6%81%E8%81%9E%E6%B8%AF%E8%81%9E/odn-20230625-0625_00174_002/%E5%B0%88%E5%AE%B6%EF%BC%9A%E6%A9%9F%E9%95%B7%E5%88%A4%E6%96%B7%E5%B0%88%E6%A5%AD--%E9%81%BF%E5%85%8D%E5%9A%B4%E9%87%8D%E6%84%8F%E5%A4%96
- Ng, K. K. H. (2023, Jun 24). Cathay Pacific Incident: Expert Praises Pilot's Professionalism, Notes High Risk of Landing After Circling in the Air. (Chinese title: 國泰客機事故 | 專家稱機師表現專業 指空中盤旋後降落危險度高). *Dot Dot News*, Hong Kong. <https://www.dotdotnews.com/a/202306/24/AP6496b744e4b08eeabfe0b428.html>
- Ng, K. K. H. (2023, Jun 24). Expert States High Risk in Emergency Landing After Airborne Circling; Pilot Demonstrated Professionalism. (Chinese title: 專家稱空中盤旋後緊急降落危險度高 機師表現專業). *RTHK*, Hong Kong. <https://news.rthk.hk/rthk/ch/component/k2/1706115-20230624.htm>
- Ng, K. K. H. (2023, Jun 24). Aircraft Engineer Says Sudden Braking Can Generate High Temperatures, Potentially Causing Tire Blowouts. (Chinese title: 飛機工程師稱飛機急煞產生高溫或致輪胎爆裂). *Now News*, Hong Kong. <https://news.now.com/home/local/player?newsId=522345>
- Ng, K. K. H. (2023, Jun 24). [Cathay Incident] Aviation Expert Believes Captain's Decision to Abort Takeoff Was Correct; Passengers Should Not Take Luggage During Evacuation. (Chinese title: 【國泰事故】有航空專家認為機長終止起飛決定正確 乘客不應帶行李逃生). *TVB News*, Hong Kong. <https://news.tvb.com/tc/local/6496786295300a4e92f23361/%E6%B8%AF%E6%BE%B3-%E3%80%90%E5%9C%8B%E6%B3%B0%E4%BA%8B%E6%95%85%E3%80%91%E6%9E%97%E4%B8%96%E9%9B%84%E7%A8%B1%E9%AB%98%E5%BA%A6%E9%97%9C%E6%B3%A8%E6%9C%89%E8%88%AA%E7%A9%BA%E5%B0%88%E5%AE%B6%E8%AA%8D%E7%82%BA%E6%A9%9F%E9%95%B7%E7%B5%82%E6%AD%A2%E8%B5%B7%E9%A3%9B%E6%B1%BA%E5%AE%9A%E6%AD%A3%E7%A2%BA>
- Ng, K. K. H. (2023, Jun 24). Close shave for Hong Kong Cathay Pacific flight, as '12 wheels damaged' when emergency brakes applied just before take-off. *SCMP*, Hong Kong. https://www.scmp.com/news/hong-kong/society/article/3225238/11-injured-cathay-pacific-flight-departing-hong-kong-after-tyre-bursts-and-take-aborted?module=lead_hero_story&pgtype=homepage
- Ng, K. K. H. (2023, Jun 12). Dog Spotted Running on the Tarmac. (Chinese title: 停機坪驚現狗衝). *Oriental Daily*, Hong Kong. https://orientaldaily.on.cc/content/%E8%A6%81%E8%81%9E%E6%B8%AF%E8%81%9E/odn-20230612-0612_00176_221/%E5%81%9C%E6%A9%9F%E5%9D%AA%E9%A9%9A%E7%8F%BE%E7%8B%97%E8%A1%9D%E6%8F%AD%E7%95%B6%E5%B1%80%E6%8A%8A%E9%97%9C%E7%A9%BF%E7%AA%BF
- Ng, K. K. H. (2023, Mar 17). Airport System Failure: Scholar Advocates for Review of Information Dissemination. (Chinese title: 機場系統故障 學者倡檢討信息發布). *HKET*, Hong Kong. <https://paper.hket.com/article/3484459/%E6%A9%9F%E5%A0%B4%E7%B3%BB%E7%B5%B1%E6%95%85%E9%9A%9C%20%E5%AD%B8%E8%80%85%E5%80%A1%E6%AA%A2%E8%A8%8E%E4%BF%A1%E6%81%AF%E7%99%BC%E5%B8%83?mtc=70055>
- Ng, K. K. H. (2023, Feb 10). Enhance Training for Aircraft Maintenance and Aeronautical Engineering Professionals to Seize Opportunities in Aviation Industry Development. (Chinese title: 加強培訓飛機維修及航空工程人才 迎航空業發展機遇). *Mingpao JUMP*, Hong

- Kong. <https://jump.mingpao.com/career-news/news/%e5%8a%a0%e5%bc%b7%e5%9f%b9%e8%a8%93%e9%a3%9b%e6%a9%9f%e7%b6%ad%e4%bf%ae%e5%8f%8a%e8%88%aa%e7%a9%ba%e5%b7%a5%e7%a8%8b%e4%ba%ba%e6%89%8d-%e8%bf%8e%e8%88%aa%e7%a9%ba%e6%a5%ad%e7%99%bc%e5%b1%95%e6%a9%9f/>
- Ng, K. K. H. (2023, Jan 4). HK Express Flights Experience Abnormal Cabin Pressure, Forced to Return and Make Emergency Descent. (Chinese title: 快運兩航機氣壓異常 需折返急降). *HKET*, Hong Kong. <https://paper.hket.com/article/3433877/%E5%BF%AB%E9%81%8B%E5%85%A9%E8%88%AA%E6%A9%9F%E6%B0%A3%E5%A3%93%E7%95%B0%E5%B8%B8%20%E9%9C%80%E6%8A%98%E8%BF%94%E6%80%A5%E9%99%8D>
- Ng, K. K. H. (2022, Nov 9). Hong Kong to boost investment in Zhuhai airport. *SCMP*, Hong Kong. <https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3199058/hong-kong-signs-deal-increase-investment-zhuhai-airport-bid-benefit-air-industry-both-cities>
- Ng, K. K. H. (2022, Oct 12). COVID Controls Relaxed For Local Aircrew. *SCMP*, Hong Kong. <https://www.scmp.com/news/hong-kong/health-environment/article/3194773/coronavirus-hotel-quarantine-during-overseas>
- Ng, K. K. H. (2022, Oct 3). Mainland China Conducts First Selection of Aerospace Payload Specialists in Hong Kong (Chinese title: 內地首在港選拔 航天載荷專家). *HKET*, Hong Kong. <https://paper.hket.com/article/3367048>
- Ng, K. K. H. (2022, Oct 3). National Space Dream: Inviting Hong Kong Residents to Join the Journey. (Chinese title: 國家航天夢 邀港人同行). *Singtao Daily*, Hong Kong. <https://std.stheadline.com/daily/article/2489191/%E6%97%A5%E5%A0%B1-%E6%B8%AF%E8%81%9E-%E5%9C%8B%E5%AE%B6%E8%88%AA%E5%A4%A9%E5%A4%A2-%E9%82%80%E6%B8%AF%E4%BA%BA%E5%90%8C%E8%A1%8C>
- Ng, K. K. H. (2022, Oct 3). Payload Specialist Selection: Preliminary Round Begins on October 6. (Chinese title: 載荷專家選拔 10.6 展開初選). *Ta Kung Pao*, Hong Kong. <http://www.takungpao.com.hk/news/232109/2022/1003/771237.html>
- Ng, K. K. H. (2022, Oct 3). Hong Kong United: Episoda 76. (Chinese title: 凝聚香港：第七十六集). *RTHK*, Hong Kong. <https://www.rthk.hk/tv/dtt32/programme/hkunited/episode/835933>
- Ng, K. K. H. (2022, Oct 3). "Hong Kong Scholar: Nation Recognizes Hong Kong's Aerospace Research Capabilities (Chinese title: 港學者：國家肯定香港航空航天科研水平). *Phoenix TV*, Hong Kong. <http://share.fengshows.com/article.html?id=569a957e-81ad-4f97-88ad-95550580e6e4&channelID=r06&time=1664859325.767306>
- Ng, K. K. H. (2022, Oct 2). Scholar Says Recruiting Payload Specialists in Hong Kong Aids Related Research Development; HKUST Estimates Around 100 People Meet Selection Criteria (Chinese title: 學者稱在港招募載荷專家有助相關研究發展 科大料約百人員符遴選資格). *TVB News*, Hong Kong. <https://news.tvb.com/tc/local/6339ab2de79239ba75dec560/%E6%B8%AF%E6%BE%B3-%E5%AD%B8%E8%80%85%E7%A8%B1%E5%9C%A8%E6%B8%AF%E6%8B%9B%E5%8B%9F%E8%BC%89%E8%8D%B7%E5%B0%88%E5%AE%B6%E6%9C%89%E5%8A%A9%E7%9B%B8%E9%97%9C%E7%A0%94%E7%A9%B6%E7%99%BC%E5%B1%95-%E7%A7%91%E5%A4%A7%E6%96%99%E7%B4%84%E7%99%BE%E4%BA%BA%E5%93%A1%E7%AC%A6%E9%81%B4%E9%81%B8%E8%B3%87%E6%A0%BC>
- Ng, K. K. H. (2022, Sep 7). Airlines add flights to Hong Kong but the aviation hub won't be back to normal anytime soon. *CNN Business*, USA. <https://edition.cnn.com/2022/09/26/business/hong-kong-covid-aviation-quarantine-lifted-intl-hnk/index.html>
- Ng, K. K. H. (2022, Aug 5). "Straits Encircled, Civil Aviation Squeezed; Missiles Soar as Cross-Strait Tensions Rise. (Chinese title: 台海被圍封 民航陷夾縫 導彈劃長空 兩岸炮聲隆). *Oriental Daily*, Hong Kong. <https://orientaldaily.on.cc/content/%E8%A6%81%E8%81%9E%E6%B8%AF%E8%81%9E/>

- [odn-20220805-0805_00174_001/%E5%B0%8E%E5%BD%88%E5%8A%83%E9%95%B7%E7%A9%BA--%E5%85%A9%E5%B2%B8%E7%82%AE%E8%81%B2%E9%9A%86](#)
- Ng, K. K. H. (2022, Jul 9). Third Runway Opens with Cathay Cargo Plane as First Commercial Landing. (Chinese title: 三跑啟用 國泰貨機成首著陸商業航班). *HKET*, Hong Kong. <https://paper.hket.com/article/3297100/%E4%B8%89%E8%B7%91%E5%95%9F%E7%94%A8%20%E5%9C%8B%E6%B3%B0%E8%B2%A8%E6%A9%9F%E6%88%90%E9%A6%96%E7%9D%80%E9%99%B8%E5%95%86%E6%A5%AD%E8%88%AA%E7%8F%AD>
- Ng, K. K. H. (2022, Jul 8). Third Runway at Airport Officially Opens, Bringing Flight Paths Closer to Tai Mo Shan; Scholar Believes It Poses Little Risk to Flight Safety. (Chinese title: 機場三跑正式啟用飛機航道更近大帽山 有學者認為對飛行安全風險不大). *TVB News*, Hong Kong. <https://news.tvb.com/tc/local/62c800d7e774ffb161d906af>
- Ng, K. K. H. (2022, Apr 12). "General Knowledge Guide: Fair Culture in the Aviation Industry - Human Approach to Honest Mistakes, Identifying Errors, and Improving Systems (Chinese title: 通識導賞: 航空業公正文化 人性處理無心之過 揪出錯誤 改善機制). *Mingpao*, Hong Kong. <https://ol.mingpao.com/ldy/cultureleisure/culture/20220403/1648923289327/%E9%80%9A%E8%AD%98%E5%B0%8E%E8%B3%9E-%E8%88%AA%E7%A9%BA%E6%A5%AD%E5%85%AC%E6%AD%A3%E6%96%87%E5%8C%96-%E4%BA%BA%E6%80%A7%E8%99%95%E7%90%86%E7%84%A1%E5%BF%83%E4%B9%8B%E9%81%8E-%E6%8F%AA%E5%87%BA%E9%8C%AF%E8%AA%A4-%E6%94%B9%E5%96%84%E6%A9%9F%E5%88%B6>
- Ng, K. K. H. (2022, Jan 21). PolyU's Master of Science in Aviation Engineering: Specialized Training for Career Takeoff. (Chinese title: 理大民用航空工程學理學碩士課程 專學專用 迎事業起飛). *Recruit*, Hong Kong. <https://www.recruit.com.hk/article/%E7%90%86%E5%A4%A7%E6%B0%91%E7%94%A8%E8%88%AA%E7%A9%BA%E5%B7%A5%E7%A8%8B%E5%AD%B8%E7%90%86%E5%AD%B8%E7%A2%A9%E5%A3%AB%E8%AA%B2%E7%A8%8B-%E5%B0%88%E5%AD%B8%E5%B0%88%E7%94%A8-%E8%BF%8E%E4%BA%8B%E6%A5%AD%E8%B5%B7%E9%A3%9B/42410>

Editorial experiences

Editorship (special issue)

- Ng, K. K. H. (Managing guest editor), Trapsilawati, F., Hanowski, R., Woodman, R., Feng, S., & Li, Q. (2024). Special Session on “Improving transport safety and operator’s situational awareness via emerging ambient intelligence and human-machine interaction using consumer electronics. *IEEE Transactions on Consumer Electronics*. (2022 SCI IF: 4.3, JCR: Q2)
- Tang, T. (Managing guest editor), Ng, K. K. H., Sun, H., Yu, S., & Zou, C. (2023). Special issue on improving energy efficiency of sustainable transportation system. *Sustainable Energy Technologies and Assessment*. (2022 SCI IF: 8.0, JCR: Q1)
- Lee, C. K. M. (Managing guest editor), Ng, K. K. H., Jiao, R., & Yang, Z. (2022). Special issue on Emerging intelligent automation and optimisation methods for adaptive decision making. *Advanced Engineering Informatics*. (2022 SCI IF:8.8, JCR: Q1)

Research publications

Journal articles in the fields of aviation engineering, operations and management (in reverse chronological order)

* corresponding author; # Top 10% in the field; \$ Top 5% in the field.

- Chan, Y. Y., Ng, K. K. H., Wang, T., Hon, K. K., & Liu, C.-H. (2025). Near time-optimal trajectory optimisation for drones in last-mile delivery using spatial reformulation approach. *Transportation Research Part C: Emerging Technologies*, 171, 104986. doi: <https://doi.org/https://doi.org/10.1016/j.trc.2024.104986> (IF: 7.6, 7/72 in TRANSPORTATION SCIENCE & TECHNOLOGY, Q1, Top 10% in the field)
- Li, Q., Ng, K. K. H., Yu, S. C. M., Yiu, C. Y., Li, F., & Chan, F. T. S. (2025). Using EEG and eye-tracking as indicators to investigate situation awareness variation during flight monitoring in air traffic control system. *Journal of Navigation*, 1-22. Doi: <https://doi.org/10.1017/S0373463325000037> (IF: 1.9, 10/25 in ENGINEERING, Q2)
- Liu, Q., Li, F.*, Ng, K. K. H., Han, J., & Feng, S. (2025). Accident investigation via LLMs reasoning: HFACS-guided Chain-of-Thoughts enhance general aviation safety. *Expert Systems with Applications*, 269, 126422. doi:<https://doi.org/https://doi.org/10.1016/j.eswa.2025.126422> (IF: 7.5, 6/106 in OPERATIONS RESEARCH & MANAGEMENT SCIENCE, Q1, Top 5% in the field)
- Jin, Z., Ng, K. K. H., Wang, H., Wang, S., & Zhang, C. (2025). Electric airport ferry vehicle scheduling problem for sustainable operation. *Journal of Air Transport Management*, 123, 102711. doi: <https://doi.org/https://doi.org/10.1016/j.jairtraman.2024.102711> (IF: 3.9, 18/57 in TRANSPORTATION, Q2)
- Jin, Z., Ng, K. K. H., Zhang, C., Chan, Y. Y., & Qin, Y. (2025). A multistage stochastic programming approach for drone-supported last-mile humanitarian logistics system planning. *Advanced Engineering Informatics*, 65, 103201. Doi: <https://doi.org/https://doi.org/10.1016/j.aei.2025.103201> (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Zhang, C., Jin, Z., Ng, K. K. H.*, Tang, T., Zhang, F., & Liu, W. (2025). Predictive and prescriptive analytics for robust airport gate assignment planning in airside operations under uncertainty. *Transportation Research Part E: Logistics and Transportation Review*. 195, 103963. doi: <https://doi.org/https://doi.org/10.1016/j.tre.2025.103963> (IF: 8.3, 3/181 in ENGINEERING, CIVIL, Q1, Top 5% in the field)
- Yiu, C. Y., Ng, K. K. H., Li, Q., & Yuan, X. (January 2025). Gaze behaviours, situation awareness and

- cognitive workload of air traffic controllers in radar screen monitoring tasks with varying task complexity. *International Journal of Occupational Safety and Ergonomics*, 1-12. Doi: <https://doi.org/10.1080/10803548.2025.2453312> (IF: 1.63, 17/24 in ERGONOMICS, Q3)
- Zhu, Y., & Ng, K. K. H.* (2025). Spatial temporal modeling of air traffic network evolution and resilience enhancement in response to the dynamic coupling of propagation outbreaks. *Journal of Transport Geography*, 123, 104116. doi: <https://doi.org/https://doi.org/10.1016/j.jtrangeo.2025.104116> (IF: 5.7, 7/172 in GEOGRAPHY, Q1, Top 5% in the field)
- Chen, S., Wu, L.*, Ng, K. K. H., Liu, W., & Wang, K. (February 2024). How airports enhance the environmental sustainability of operations: A critical review. *Transportation Research Part E: Logistics and Transportation Review*, 183, 103440. doi: <https://doi.org/https://doi.org/10.1016/j.tre.2024.103440> (IF: 8.3, 3/181 in ENGINEERING, CIVIL, Q1, Top 5% in the field)
- Chu, N., Ng, K. K. H.*, Liu, Y., Hon, K. K., Chan, P. W., Li, J., & Zhang, X. (January 2024). Assessment of approach separation with probabilistic aircraft wake vortex recognition via deep learning. *Transportation Research Part E: Logistics and Transportation Review*, 181, 103387. doi: <https://doi.org/10.1016/j.tre.2023.103387> (IF: 8.3, 3/181 in ENGINEERING, CIVIL, Q1, Top 5% in the field)
- Chu, N., Ng, K. K. H.*, Zhu, X., Liu, Y., Li, L., & Hon, K. K. (October 2024). Towards dynamic flight separation in final approach: model fusion strategy of CNN and attention-based TCN for long-term spatiotemporal wake vortex prediction and safety assessment. *Transportation Research Part C: Emerging Technologies*, 169, 104876. doi: <https://doi.org/https://doi.org/10.1016/j.tre.2024.104876> (IF: 7.6, 7/72 in TRANSPORTATION SCIENCE & TECHNOLOGY, Q1, Top 10% in the field)
- Chan, Y. Y., Ng, K. K. H.*, Lee, C. K. M., Keung, K. L., & Hsu, L.T. (June 2023). Wind dynamic and energy-efficiency path planning for unmanned aerial vehicles in the lower-level airspace and urban air mobility context. *Sustainable Energy Technologies and Assessments*, 57, 103202. doi: <https://doi.org/10.1016/j.seta.2023.103202>. (IF: 7.1, 21/91 in GREEN & SUSTAINABLE SCIENCE & TECHNOLOGY, Q1)
- Jin, Z., Ng, K. K. H.*, & Zhang, C. (March 2024). Robust optimisation for vertiport location problem considering travel mode choice behaviour in urban air mobility systems. *Journal of the Air Transport Research Society*, 100006. Doi: <https://doi.org/https://doi.org/10.1016/j.jatrs.2024.100006>
- Jin, Z., Ng, K. K. H.*, Zhang, C., Wu, L., & Li, A. (March 2024). Integrated optimisation of strategic planning and service operations for urban air mobility systems. *Transportation Research Part A: Policy and Practice*, 183, 104059. <https://doi.org/https://doi.org/10.1016/j.tra.2024.104059> (IF: 6.3, 6/57 in TRANSPORTATION, Q1, Top 5% in the field)
- Jin, Z., Ng, K. K. H.*, Zhang, C., Liu, W., Zhang, F., & Xu, G. (May 2024). A risk-averse distributionally robust optimisation approach for drone-supported relief facility location problem. *Transportation Research Part E: Logistics and Transportation Review*. <https://doi.org/https://doi.org/10.1016/j.tre.2024.103538> (IF: 8.3, 3/181 in ENGINEERING, CIVIL, Q1, Top 5% in the field)
- Liu, Q., Li, F.*, & Ng, K. K. H. (May 2024). Unveiling the Determinants of Injury Severity Across Age Groups: A Deep Dive into the Unobserved Heterogeneity Among Pedestrian Crashes. *Analytic Methods in Accident Research*, 43, 100336. Doi: <https://doi.org/https://doi.org/10.1016/j.amar.2024.100336>. (IF: 12.5, 6/57 in TRANSPORTATION, Q1, Top 5% in the field)
- Qin, Y., Ng, K. K. H., & Sun, X*. (March 2024). Service accessibility strategy for aircraft maintenance

- routing with interorganisational collaborations on outsourcing maintenance. *Computers & Industrial Engineering*, 190, 110071. <https://doi.org/https://doi.org/10.1016/j.cie.2024.110071> (IF: 6.7, 11/69 in ENGINEERING, INDUSTRIAL, Q1)
- Qin, Y., Ng, K. K. H.*, Sun, X., Yao, S., & Wen, X. (July 2024). Designing a collaborative maintenance planning mechanism between airline and maintenance company using a bilevel model – considering flexible maintenance schedule and service charges. *Expert Systems with Applications*, 255, 124666. Doi: <https://doi.org/https://doi.org/10.1016/j.eswa.2024.124666>. (IF: 7.5, 6/106 in OPERATIONS RESEARCH & MANAGEMENT SCIENCE, Q1, Top 5% in the field)
- Yeung, T. C., Zhang, C., Jin, Z., & Ng, K. K. H.* (2024). A joint stochastic programming approach for aircraft landing and terminal traffic flow problem under weather scenarios. *Journal of the Air Transport Research Society*, 3, 100046. <https://doi.org/https://doi.org/10.1016/j.jatrs.2024.100046>
- Yuan, X., Ng, K. K. H.*, Li, Q., Yiu, C. Y., Lau, C. K., Fung, K. H., & Ng, L. H. (June 2024). Exploring the Futuristic Paradigm of Human-Centric Interaction in Cockpit: An Augmented Reality Assisted Head-Up Display Design. *Advanced Engineering Informatics*. (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Li, Q., Leung, H. C., Ho, M. H., Leung, K. L., Ng, K. K. H.*, & Yiu, C. Y. (July 2023). The effects of aeronautical decision-making models on student pilots' situational awareness and cognitive workload in simulated non-normal flight deck environment. *International Journal of Aerospace Psychology*. 1-17. doi: <https://doi.org/10.1080/24721840.2023.2231506> (IF: 1.0, 85/113 in PSYCHOLOGY, APPLIED, Q4)
- Li, Q., Chan, C. H., Ng, K. K. H.*, Yuen, X., & Yiu, C. Y. (April 2023). Single-pilot operations in commercial flight: effects on neural activity and visual behaviour under abnormalities and emergencies. *Chinese Journal of Aeronautics*. <https://doi.org/https://doi.org/10.1016/j.cja.2024.04.007> (IF: 5.3, 4/52 in ENGINEERING, AEROSPACE, Q1, Top 10% in the field)
- Li, Q., Ng, K. K. H.*, Yiu, C. Y., Yuan, X., So, C. K., & Ho, C. C. (June 2023). Securing air transportation safety through identifying pilot's risky VFR flying behaviours: An EEG-based neurophysiological modelling using machine learning algorithms. *Reliability Engineering & System Safety*, 238, 109449. doi: <https://doi.org/10.1016/j.res.2023.109449> (IF: 9.4, 4/106 in OPERATIONS RESEARCH & MANAGEMENT SCIENCE, Q1, Top 5% in the field)
- Liu, Y., Ng, K. K. H.*, Chu, N., Hon, K. K., & Zhang, X. (June 2023). Spatiotemporal Image-Based Flight Trajectory Clustering Model with Deep Convolutional Autoencoder Network. *Journal of Aerospace Information Systems*, 0(0), 1-13. doi: <https://doi.org/10.2514/1.1011194>. (IF: 1.3, 25/52 in ENGINEERING, AEROSPACE, Q2)
- Qin, Y., & Ng, K. K. H.*. (March 2023). Analysing the impact of collaborations between airlines and maintenance service company under MRO outsourcing mode: Perspective from aircraft maintenance routing. *Journal of Air Transport Management*. 109, 102396. doi: <https://doi.org/10.1016/j.jairtraman.2023.102396>. (IF: 3.9, 18/57 in TRANSPORTATION, Q2)
- Yiu, C. Y., Ng, K. K. H., Chan, F. T. S.*, & Li, Q. (September 2023). Vaccines, associated risk and air transport industry post-COVID-19: A structural equation modelling-based empirical study in Hong Kong context. *Research in Transportation Business & Management*. (IF: 4.1, 16/57 in TRANSPORTATION, Q2)
- Li, Q., Ng, K. K. H.*, Yu, S. C. M., Yiu, C. Y., & Lyu, M. (December 2022). Recognising situation awareness associated with different workloads using EEG and eye-tracking features in air traffic control tasks. *Knowledge-based Systems*, p. 110179. doi: <https://doi.org/10.1016/j.knosys.2022.110179> (IF: 7.2, 27/197 in COMPUTER SCIENCE,

ARTIFICIAL INTELLIGENCE , Q1)

- Yiu, C. Y., Ng, K. K. H.*, Yu, C. M., & Yu, C. W. (September 2022). Sustaining aviation workforce after the pandemic: Evidence from Hong Kong aviation students toward skills, specialised training, and career prospects through a mixed-method approach. *Transport Policy*, vol. 128, pp. 179-192, doi: <https://doi.org/10.1016/j.tranpol.2022.09.020>. (IF: 6.3, 6/57 in TRANSPORTATION, Q1, Top 5% in the field)
- Yiu, C. Y., Ng, K. K. H.*, Li, X., Zhang, X., Li, Q., Lam, H. S. ,& Chong, M. H. (July 2022). Towards safe and collaborative aerodrome operations: Assessing shared situational awareness for adverse weather detection with EEG-enabled Bayesian neural networks. *Advanced Engineering Informatics*, 53, 101698. doi:<https://doi.org/10.1016/j.aei.2022.101698> (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Ng, K. K. H., Chan, F. T. S.*, Qin, Y., & Xu, G. (June 2022). The impacts of longitudinal separation, efficiency loss and cruise speed adjustment in robust terminal traffic flow problem under uncertainty. *Transportation Letters: The International Journal of Transportation Research*. 1-24. doi: <https://doi.org/10.1080/19427867.2022.2077004> (IF: 3.3, 26/57 in TRANSPORTATION, Q2)
- Li, Q., Ng, K. K. H., Fan, Z., Yuan, X., Liu, H.*, & Bu, L.* (June 2021). A human-centred approach based on functional near-infrared spectroscopy for adaptive decision-making in the air traffic control environment: A case study. *Advanced Engineering Informatics*, 49, 101325. doi: <https://doi.org/10.1016/j.aei.2021.101325> (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Ng, K. K. H.* (February 2021). Emission-aware robust flight path planning with respect to fuel consumption and en-route contrail presence. *Transportmetrica B: Transport Dynamics*, 1-44. doi: <https://doi.org/10.1080/21680566.2022.2036651> (IF: 3.3, 26/57 in TRANSPORTATION, Q2)
- Ng, K. K. H., Chen, C.-H.*, & Lee, C. K. M. (January 2021). Mathematical programming formulations for robust airside terminal traffic flow optimisation problem. *Computers & Industrial Engineering*, 154, 107119. doi: <https://doi.org/10.1016/j.cie.2021.107119> (IF: 6.7, 11/69 in ENGINEERING, INDUSTRIAL, Q1)
- Qin, Y., Ng, K. K. H.*, Hu, H.*, Chan, F. T. S., Xiao, S. (September 2021). Post disaster management an airport: a coordination and optimisation of runway and hangar resources for relief cargo transports. *Advanced Engineering Informatics*, 50, 101403. doi: <https://doi.org/10.1016/j.aei.2021.101403> (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Xue, D.*, Hsu, L.-T., Wu, C.-L., Lee, C.-H., & Ng, K. K. H. (August 2021). Cooperative surveillance systems and digital-technology enabler for a real-time standard terminal arrival schedule displacement. *Advanced Engineering Informatics*, 50, 101402. doi: <https://doi.org/10.1016/j.aei.2021.101402> (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Yiu, C. Y., Ng, K. K. H.*, Lee, C.-H., Chow, C. T., Chan, T. C., Li, K. C., & Wong, K. Y. (November 2021). A digital twin-based platform towards intelligent automation with virtual counterparts of flight and air traffic control operations. *Applied Sciences*, 11(22). doi: <https://doi.org/10.3390/app112210923> (IF: 2.5, 44/179 in ENGINEERING, MULTIDISCIPLINARY, Q1)
- Ng, K. K. H., Lee, C. K. M., Chan, F. T. S., Chen, C.-H.*, & Qin, Y. (January 2020). A two-stage robust optimisation for terminal traffic flow problem. *Applied Soft Computing*, 89, 106048. doi: <https://doi.org/10.1016/j.asoc.2019.106048> (IF: 7.2, 15/169 in COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS JCR, Q1, Top 10% in the field)

- Ng, K. K. H.*, Lee, C. K. M., Zhang, S. Z., & Keung, K. L. (December 2020). The impact of heterogeneous arrival and departure rates of flights on runway configuration optimisation. *Transportation Letters: The International Journal of Transportation Research*, 1-12. <https://doi.org/10.1080/19427867.2020.1852496> (IF: 3.3, 26/57 in TRANSPORTATION, Q2)
- Xue, D., Ng, K. K. H.*, & Hsu, L.-T. (August 2020). Multi-objective flight altitude decision considering contrails, fuel consumption and flight time. *Sustainability*. 12(15), 6253. doi: <https://doi.org/10.3390/su12156253> (IF: 3.3, 58/91 in GREEN & SUSTAINABLE SCIENCE & TECHNOLOGY, Q2)
- Lee, C. K. M., Zhang, S. Z.*, & Ng, K. K. H. (September 2019). Design of an integration model for air cargo transportation network design and flight route selection. *Sustainability*. 11(19), 5197. doi: <https://doi.org/10.3390/su11195197> (IF: 3.3, 58/91 in GREEN & SUSTAINABLE SCIENCE & TECHNOLOGY, Q2)
- Lee, C. K. M.*, Ng, K. K. H., Chan, H. K., Choy, K. L., Tai, W. C., & Choi, L. S. (August 2018). A multi-group analysis of social media engagement and loyalty constructs between full-service and low-cost carriers in Hong Kong. *Journal of Air Transport Management*, 73, 46-57. doi: <https://doi.org/10.1016/j.jairtraman.2018.08.009> (IF: 3.9, 18/57 in TRANSPORTATION, Q2)
- Ng, K. K. H., Lee, C. K. M., Chan, F. T. S., & Lv, Y.* (February 2018). Review on meta-heuristics approaches for airside operations research. *Applied Soft Computing*, 66, 104-133. doi: <https://doi.org/10.1016/j.asoc.2018.02.013> (IF: 7.2, 15/169 in COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS JCR, Q1, Top 10% in the field)
- Ng, K. K. H., Lee, C. K. M.*, Chan, F. T. S., & Qin, Y. (August 2017). Robust aircraft sequencing and scheduling problem with arrival/departure delay using the min-max regret approach. *Transportation Research Part E: Logistics and Transportation Review*, 106, 115-136. doi: <https://doi.org/10.1016/j.tre.2017.08.006> (IF: 8.3, 3/181 in ENGINEERING, CIVIL, Q1, Top 5% in the field)

Journal articles in the fields of operations research, optimisation methods, soft computing and artificial intelligence (in reverse chronological order)

- Keung, K. L., Chan, Y. Y., Ng, K. K. H.*, Mak, S. L., Li, C. H., Qin, Y.*, & Yu, C. W. (February 2022). Edge intelligence and agnostic robotic paradigm in resource synchronisation and sharing in flexible robotic and facility control system. *Advanced Engineering Informatics*, 52, 101530. doi: <https://doi.org/10.1016/j.aei.2022.101530>. (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Ng, K. K. H., Chen, C.-H., Lee, C. K. M.*, Jiao, J., & Yang, Z. (January 2021). A systematic literature review on intelligent automation: Aligning concepts from theory, practice, and future perspectives. *Advanced Engineering Informatics*. doi: <https://doi.org/10.1016/j.aei.2021.101325> (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Lee, C. K. M., Ng, K. K. H.*, Chen, C.-H., Lau, H. C. W., Chung, S. Y., & Tsoi, T. (December 2020). American Sign Language recognition and training method with recurrent neural network. *Expert Systems with Application*, 167, 114403. doi: <https://doi.org/10.1016/j.eswa.2020.114403>. (IF: 7.5, 6/106 in OPERATIONS RESEARCH & MANAGEMENT SCIENCE, Q1, Top 5% in the field)
- Lee, C. K. M., Lin, B. B.*, Ng, K. K. H., Lv, Y., & Tai, W. C. (October 2019). Smart robotic mobile fulfilment system with dynamic conflict-free strategies considering cyber-physical integration. *Advanced Engineering Informatics*, 42, 100998. doi: <https://doi.org/10.1016/j.aei.2019.100998> (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)
- Lee, C. K. M., Zhang, S. Z.*, & Ng, K. K. H. (July 2019). In-plant logistics simulation model for the

catering service industry towards sustainable development: a case study. *Sustainability*, 11(13), 3655. doi: <https://doi.org/10.3390/su11133655> (IF: 3.3, 58/91 in GREEN & SUSTAINABLE SCIENCE & TECHNOLOGY, Q2)

Ng, K. K. H.*, Lee, C. K. M., Zhang, S. Z., Wu, K., & Ho, W. (May 2017). A multiple colonies artificial bee colony algorithm for a capacitated vehicle routing problem and re-routing strategies under time-dependent traffic congestion. *Computers & Industrial Engineering*, 109, 151-168. doi: <http://dx.doi.org/10.1016/j.cie.2017.05.004> (IF: 6.7, 11/69 in ENGINEERING, INDUSTRIAL, Q1)

Lee, C. K. M., Lv, Y.*, Ng, K. K. H., Ho, W., & Choy, K. L. (October 2017). Design and application of Internet of Things-based warehouse management system for smart logistics. *International Journal of Production Research*, 1-16. doi: <http://dx.doi.org/10.1080/00207543.2017.1394592> (IF: 7.0, 7/106 in OPERATIONS RESEARCH & MANAGEMENT SCIENCE, Q1, Top 10% in the field)

Hu, H., Ng, K. K. H.*, & Qin, Y. (October 2016). Robust parallel machine scheduling problem with uncertainties and sequence-dependent setup time. *Scientific Programming*, 2016, 13. doi: <http://dx.doi.org/10.1155/2016/5127253>

Journal articles in the field of multi-disciplinary engineering (in reverse chronological order)

Lv, Y., Zhao, W., Zhao, Z., Li, W.*, & Ng, K. K. H. (April 2022). Vibration signal-based early fault prognosis: Status quo and applications. *Advanced Engineering Informatics*, 52, 101609. doi: <https://doi.org/https://doi.org/10.1016/j.aei.2022.101609> (IF: 8.0, 4/179 in ENGINEERING, MULTIDISCIPLINARY, Q1, Top 5% in the field)

Bu, L., Chen, C.-H., Ng, K. K. H.*, Zheng, P., Dong, G., & Liu, H. (September 2020). A user-centric design approach for smart product-service systems using virtual reality: A case study. *Journal of Cleaner Production*, 280, 124413. doi: <https://doi.org/10.1016/j.jclepro.2020.124413> (IF: 9.7, 9/81 in ENGINEERING, ENVIRONMENTAL, Q1, Top 10% in the field)

Keung, K. L.*, Lee, C. K. M., Ji, P., & Ng, K. K. H. (May 2020). Cloud-based cyber-physical system in robotic mobile fulfillment system: a case study of collision avoidance. *IEEE Access*, 1-1. doi: <http://dx.doi.org/10.1109/ACCESS.2020.2992475> (IF: 3.4, 47/119 in TELECOMMUNICATIONS, Q2)

Lee, C. K. M., Huo, Y. Z., Zhang, S. Z.*, & Ng, K. K. H. (February 2020). Design of a Smart Manufacturing System with the Application of Multi-access Edge Computing and Blockchain Technology. *IEEE Access*, 1-1. doi: <http://dx.doi.org/10.1109/access.2020.2972284> (IF: 3.4, 47/119 in TELECOMMUNICATIONS, Q2)

Lee, C. K. M., Tai, W. C., Ng, K. K. H.* (June 2020). System dynamic modelling of patient flow and transferral problem in a mixed public-private healthcare system: A case study of Hong Kong SAR. *Journal of Systems Science and Systems Engineering*. <https://doi.org/10.1007/s11518-019-5454-4> (IF: 1.7, 61/106 in OPERATIONS RESEARCH & MANAGEMENT SCIENCE, Q3)

Lee, C. K. M., Ng, K. K. H.*, Kwong, C. K., & Tay, S. T. (October 2018). A system dynamics model for evaluating food waste management in Hong Kong, China. *Journal of Material Cycles and Waste Management*. doi: <https://doi.org/10.1007/s10163-018-0804-8> (IF: 2.7, 192/358 in ENVIRONMENTAL SCIENCES, Q3)

Lee, C. K. M.*, Zhang, S. Z., & Ng, K. K. H. (November 2017). Development of an industrial Internet of Things suite for smart factory towards re-industrialization. *Advances in Manufacturing*, 5(4), 335-343. doi: <http://dx.doi.org/10.1007/s40436-017-0197-2> (IF: 4.2, 20/68 in ENGINEERING, MANUFACTURING, Q2)

Journal articles in the other research fields (in reverse chronological order)

Keung K. L., Lee, C. K. M.*, **Ng, K. K. H.**, & Leung, S. S., & Choy, K. L. (April 2018). An empirical study on patients' acceptance and resistance towards electronic health record sharing system: a case study of Hong Kong. *International Journal of Knowledge and Systems Science*, 9(2), 1-27. doi: <https://doi.org/10.4018/IJKSS.2018040101> (IF: 0.6, 103/106 in OPERATIONS RESEARCH & MANAGEMENT SCIENCEJCR, Q4)

Conference paper (in reverse chronological order)

- Chan, Y. Y., **Ng, K. K. H.***, Liu, C.H., & Ho, K. K. (2024, Jul). Wind dynamics and homotopy path planning for unmanned aerial vehicle trajectory optimisation. *AIAA Aviation Forum*. Las Vegas, Nevada, U.S.
- Chu, N., **Ng, K. K. H.***, & Liu, Y. (2024, Jul). Analysing the Potential of Dynamic Aircraft Wake Separation via Data-driven Aircraft Wake Region Detection. *AIAA Aviation Forum*. Las Vegas, Nevada, U.S.
- Liu, Y., **Ng, K. K. H.***, & Chu, N. (2024, Jul). Interactive Temporal Convolutional Network for Spatio-temporal flight trajectory prediction and safety assessment in terminal manoeuvring area. *AIAA Aviation Forum*. Las Vegas, Nevada, U.S.
- Ng, K. K. H.***, Li, Q., Yuan, X. & Yiu, C. Y. (2024, Jul). How does a pilot's mental state and cognitive abilities change when in single pilot operations during a flight emergency? *AIAA Aviation Forum*. Las Vegas, Nevada, U.S.
- Jin, Z., Zhang, C., & **Ng, K. K. H.*** (2024, Jul). An improved variable neighbourhood search for the gate assignment problem with time windows. *AIAA Aviation Forum*. Las Vegas, Nevada, U.S.
- Yuan, X., **Ng, K. K. H.***, Lau, C. K. & Fung, K. H. (2024, Jul). Enhancing single-pilot operations with augmented reality HUD: Improving situational awareness and performance in a human-centric cockpit design?. *AIAA Aviation Forum*. Las Vegas, Nevada, U.S.
- Yiu, C. Y., **Ng, K. K. H.***, Li, Q., & Yuan, X. (2024, May). How do the levels of automation in flight operations affect pilots' cognitive workload, reaction time, and EEG brain waves in cruising flights? *2024 IEEE 4th International Conference on Human-Machine Systems (ICHMS)*. Toronto, Canada.
- Liu, Y., **Ng, K. K. H.***, & Chu, N. (2023, Dec). A exploratory study on dynamic flight trajectory deviation from convective weather hazard via deep learning approaches. *The 27th International Conference of Hong Kong Society for Transportation Studies*. Hong Kong, Hong Kong.
- Li, Q., **Ng, K. K. H.***, Leung, H. C., Ho, M. H., & Leung, K. L. (2023, Jun). Study of Aeronautical Decision Making in Simulated Non-Normal Flight Deck Environment. *AIAA AVIATION Forum and Exposition* (pp. 3475). San Diego, C.A. doi: <https://doi.org/10.2514/6.2023-3475/>.
- Li, Q., **Ng, K. K. H.***, Chu, S. T., Lau, T. Y. & Leung, C. H. (2023). Revealing the effects of increased workload and distraction on the pilot's situation awareness neurobehavioral activities. *AIAA AVIATION Forum and Exposition* (pp. 3407). San Diego, C.A. doi: <https://doi.org/10.2514/6.2023-3407>.
- Yeung, T. C., Yiu, C. Y., **Ng, K. K. H.***, Chu, H. S., & Jong, P. H. (2022, Nov). *Airside terminal traffic flow problem formulation under extreme weather: A case study in the Hong Kong International Airport*. Paper presented at the 2022 Joint 12th International Conference on Soft Computing and Intelligent Systems and 23rd International Symposium on Advanced Intelligent Systems (SCIS&ISIS), Ise, Japan.
- Li, Q, Yiu, C. Y., Yu, S. C. M., & **Ng, K. K. H.*** (2021, Dec). Situational Awareness and Flight Approach Phase Event Recognition Based on Psychophysiological Measurements. *2021 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*. Singapore, Singapore: IEEE.

- Yiu, C. Y., Tam, T. K. & **Ng, K. K. H.*** (2021, Dec). An ADS-B Aided Dynamic Traffic Alert for Robust Safety Assessment in Controlled Airspace. *2021 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*. Singapore, Singapore: IEEE.
- Yiu, C. Y., **Ng, K. K. H.***, Kwok, K. C., Lee, W. T., & Mo, H. T. (2021, Oct). Flight delay predictions and the study of its causal factors using machine learning algorithms. *The 2021 IEEE 3rd International Conference on Civil Aviation Safety and Information Technology*. Changsha, China: IEEE.
- Huo, J. G., Keung, K. L., Lee, C. K. M., **Ng, K. K. H.**, & Li, K. C. (2020, Dec). The Prediction of Flight Delay: Big Data-driven Machine Learning Approach. In *Industrial Engineering and Engineering Management (IEEM), 2020 IEEE International Conference on* (pp. -). Singapore, Singapore: IEEE.
- Ng, K. K. H.**, Keung, K. L., Lee, C. K. M., & Chow, Y. T. (2020, Dec). A large neighbourhood search approach to airline schedule disruption recovery problem. In *Industrial Engineering and Engineering Management (IEEM), 2020 IEEE International Conference on* (pp. -). Singapore, Singapore: IEEE.
- Tse, K. S., Lee, C. K. M., & **Ng, K. K. H.** (2019, Jun). A study on nurse rostering problem. In *Mathematical Methods in Reliability, 2019 IEEE International Conference on*. Hong Kong, Hong Kong.
- Ng, K. K. H.**, Lee, C. K. M., & Chan, F. T. S. (2019, Feb). An alternative path modelling method for air traffic flow problem in near terminal control area. *2019 2nd International Conference on Intelligent Autonomous Systems (ICoIAS)*. Singapore, Singapore.
- Lee, C. K. M., Keung, K. L., **Ng, K. K. H.** & Lai, D. C. P. (2018, Dec). Simulation-based multiple automated guided vehicles considering charging and collision free requirements in automatic warehouse. In *Industrial Engineering and Engineering Management (IEEM), 2018 IEEE International Conference on* (pp. 1376-1380). Bangkok, Thailand: IEEE.
- Ng, K. K. H.**, Lee, C. K. M., Chan, F. T. S. & S.Z. Zhang (2018, Dec). Dynamic semi-mixed mode runway configuration planning and runway scheduling. In *48th International Conference on Computers and Industrial Engineering, CIE 2018, Proceedings of International Conference on Computers and Industrial Engineering*. Auckland, New Zealand: CIE.
- Keung, K. L., Lee, C. K. M., **Ng, K. K. H.** & Yeung, C. K. (2018, Dec). Smart city application and analysis: real-time urban drainage monitoring by IoT sensors: A Case Study of Hong Kong. In *Industrial Engineering and Engineering Management (IEEM), 2018 IEEE International Conference on* (pp. 521-525). Bangkok, Thailand: IEEE.
- Lee, C. K. M., **Ng, K. K. H.**, & Cheng, M. C. (2018, Jul). Appointment scheduling optimisation for specialist outpatient services. In *International Conference on Industrial Engineering and Operations Management (IEOM) on* (pp. 876-883). Paris, France: IEOM Society.
- Ng, K. K. H.**, Lee, C. K. M., & Chan, F. T. S. (2017, Dec). A robust optimisation approach to the aircraft sequencing and scheduling problem with runway configuration planning. In *Industrial Engineering and Engineering Management (IEEM), 2017 IEEE International Conference on* (pp. 40-44). Singapore, Singapore: IEEE.
- Ng, K. K. H.**, & Lee, C. K. M. (2017, Aug). Aircraft scheduling considering discrete airborne delay and holding pattern in the near terminal area. In *International Conference on Intelligent Computing on* (pp.567-576). Liverpool, UK: Springer.
- Ng, K. K. H.** & Lee, C. K. M. (2016, Dec). Makespan minimisation in aircraft landing problem under congested traffic situation using modified artificial bee colony algorithm. In *Industrial Engineering and Engineering Management (IEEM), 2016 IEEE International Conference on* (pp. 750-754). Bali, Indonesia: IEEE.

- Ng, K. K. H. & Lee, C. K. M. (2016, Oct). A modified variable neighbourhood search for aircraft landing problem. In *Management of Innovation and Technology (ICMIT), 2016 IEEE International Conference on* (pp. 127-132). Bangkok, Thailand: IEEE.
- Ng, K. K. H., Tang, M. H. M., & Lee, C. K. M. (2015, Dec). Design and development of a performance evaluation system for the aircraft maintenance industry. In *Industrial Engineering and Engineering Management (IEEM), 2015 IEEE International Conference on* (pp. 564-568). Singapore, Singapore: IEEE.

Conference presentation (in reverse chronological order)

- Chu, N., Ng, K. K. H.*, & Liu, Y. (2023, Jul). Analysis of the Impact of Crosswind to Aircraft Wake Vortex Transition Through Deep Learning Approach. *The 26th ATRS World Conference*. Kobe, Japan.
- Li, Q., Ng, K. K. H.*, & Yuan, X. (2023, Jul). Using neuro-physiological data in revealing the captain's cognitive incapacities of single-pilot operation. *The 26th ATRS World Conference*. Kobe, Japan.
- Liu, Y., Ng, K. K. H.*, & Chu, N. (2023, Jul). Quantification of convective weather impact on spatiotemporal flight trajectory deviation in the terminal control area. *The 26th ATRS World Conference*. Kobe, Japan.
- Jin, Z., Ng, K. K. H.*, & Zhang, C. (2023, Jul). Robust optimisation for the vertiport location problem in urban air mobility system. *The 26th ATRS World Conference*. Kobe, Japan.
- Zhu, Y., & Ng, K. K. H.* (2023, Jul). Resilience enhancement strategy of air traffic network in response to disruptions aided by rail transport. *The 26th ATRS World Conference*. Kobe, Japan.
- Yiu, C. Y., Ng, K. K. H.*, Wong, K. Y., Wong, W. H., & Lam, K. W. (2023, Jul). On the significance of neurophysiological approach in evaluating inflight emergency training performance Approach. *The 26th ATRS World Conference*. Kobe, Japan.
- Ng, K. K. H.* (2023). How airlines suffer from weather induced delay? A synthetic convective weather prediction approach in dynamic flight trajectory deviation. *POMS-HK 2023*. Hong Kong SAR.
- Liu, Y., Ng, K. K. H.*, & Chu, N. (2022, Dec). Quantitative Effects of Convective Weather on Flight Trajectory Based on Clustering and Deep Convolutional Neural Network. *The 26th International Conference of Hong Kong Society for Transportation Studies*. Hong Kong, Hong Kong.
- Zhang, C., & Ng, K. K. H.*. (2022, Jul). A variable neighbourhood search for the dynamic gate assignment problem with time windows. *The 2022 ATRS World Conference*. Sydney, Australia.
- Ng, K. K. H., Yu, C. W., Lam, T. W., & Cheung K. K. L. (2021, Aug). Aviation emissions reduction by flight plan modelling with re-routing and altitude changes strategies. *The 2021 ATRS World Conference*. Sydney, Australia.
- Yiu, C. Y., Ng, K. K. H., & Li, Q. (2021, Aug). The air transport industry after the COVID-19: A structural equation modelling-based empirical study considering vaccines' popularity and pandemic-associated risk. *The 2021 ATRS World Conference*. Sydney, Australia.

Book chapter

- Lee, C. K. M., Cao, Y., & Ng, K. K. H. (2016). Big Data Analytics for Predictive Maintenance Strategies. *Supply Chain Management in the Big Data Era*, 50.

Manuscript under review / preparation

Journal paper under review process (in reverse chronological order)

- Chu, N., **Ng, K. K. H.***, Liu, Y., Liu, W., Tang, T., & Hon, K. K. (2024). Flight trajectory prediction approaches for civil air traffic operations: A systematical literature review and future research opportunities. *Journal of Air Transport Management*. (under 1st review)
- Du, C., Wang, K., Jiang, C., Wu, X., & **Ng, K. K. H.***(2024). Evolution and drivers of aviation emissions inequality at the city level. *Transportation Research Part D: Transport and Environment*. (under 1st review)
- Jin, Z., Zhang, C., **Ng, K. K. H.***, Tisan, X., Wang, H., & Xu, G. (2024). Humanitarian logistics planning under uncertain demand and third-party supply capacity: A distributionally robust optimisation approach. *International Journal of Production Economics*. (under 1st review)
- Li, Q., Liu, Y., Chen, C.-H., **Ng, K. K. H.***, & Yu, S. C. M. (2024). Safety in commercial single-pilot operations: Understanding and predicting the single pilot's incapacitation through convolutional neural network-based multimodal neurophysiological Analysis. *Engineering Applications of Artificial Intelligence*. (under 1st review)
- Liu, K., Du, C.*, **Ng, K. K. H.**, Li, Q., Yuan, X., & Yiu, C. Y. (2024). Securing high-speed rail transportation safety through detecting driver's stress in different driving phases: An HRV-based modelling using machine learning algorithms. *International Journal of Rail Transportation*. (under 1st review)
- Liu, Y., **Ng, K. K. H.***, Wu, C. L., Chu, N., Zhang, X., Hon, K. K., & Leung, C. Y. Y. (2024). A Transformer-BiGRU based online learning framework for tactical spatial-temporal flight trajectory prediction with holding instructions consideration. *Transportation Research Part E: Logistics and Transportation Review*. (under 1st review)
- Shu, Y., **Ng, K. K. H.***, Liu, W., Jin, Z., & Zhang, C. (2025). Optimising Last-Mile Delivery Network through Locker-Drone Logistics System Design under Uncertain Demand. *Transportation Research Part E: Logistics and Transportation Review*. (under 1st review)
- Tang, R., **Ng, K. K. H.***, Li, L., & Yang, Z. (2024). A learning-based interacting multiple model filter for trajectory prediction of small multirotor drones considering differential sequences. *Transportation Research Part C: Emerging Technologies*. (under 1st review)
- Tang, R., **Ng, K. K. H.***, & Liu, Z.Z. (2025). Aviation Climate Mitigation: Spatial-Frequency Synergy for Enhanced Contrails Detection in Satellite Imagery. *International Journal of Applied Earth Observation and Geoinformation*. (under 1st review)
- Yiu, C. Y., **Ng, K. K. H.***, Li, Q., & Yuan, X. (2024). Enhancing pilot-autopilot collaboration in single-pilot cruising operations through task allocation: A psychophysiological approach. *International Journal of Human-Computer Interaction*. (under 1st review)
- Yiu, C. Y., **Ng, K. K. H.***, Li, Q., & Yuan, X.(2024). Keeping pilots in the loop: An explainable EEG-driven deep convolutional neural network for adaptive automation during cruising flight phase. *IEEE Transactions on Intelligent Transportation Systems*. (under 1st review)
- Yiu, C. Y., **Ng, K. K. H.***, Li, Q., Yuan, X., Wong, K. Y., Wong, W. H., Lam, K. W., & Luk, A. W. Y. (2024). Enhancing pilot training assessment with event-related potentials and gaze behaviour analysis under emergencies: A case study on single-engine fire. *International Journal of Aerospace Psychology*. (under 1st review)
- Yuan, X, **Ng, K. K. H.***, Trapsilawati, F., Li, Q., Yiu, C. Y., Bu, Y., & Zhou, Q. (2024). Empowering Future Human-Machine Interaction Paradigms Considering Human Factors based on Ambient intelligence for Transportation Safety: A Review of Current Status, Issues, and Opportunities. *Safety Science*. (under 1st review)
- Yuan, X, **Ng, K. K. H.***, Li, Q., Yiu, C.Y., & Jin, Z. (2024). Recongising and Predicting the Interference

- Effects of Processing Visual and Auditory Information on Working Memory Capacity: A Preliminary Neuro-ergonomics Study. *Accident Analysis and Prediction*. (in preparation)
- Yuan, X, Ng, **K. K. H.***, Chu, W. S., Kong, K. L., & Fu, W. Y. (2024). Revealing spatial disorientation under the impact of adverse weather. *Applied Ergonomics*. (in preparation)
- Zhang, C., Ng, **K. K. H.***, Jin, Z., Yao, S., & Qin, Y. (2024). Q-Learning-driven exact and meta-heuristic algorithms for the robust gate assignment problem. *Advanced Engineering Informatics*. (under 1st review)
- Zhang, C., Ng, **K. K. H.***, Jin, Z., Sun, X., & Qin, Y. (2024). Risk-averse two-stage stochastic programming approach for gate assignment problem under arrival time uncertainty. *Computers & Industrial Engineering*. (under 1st review)
- Zhang, C., Jin, Z., Ng, **K. K. H.***, Liu, Y., & Wu, L. (2024). Stabilised branch-and-check method for optimising multi-runway aircraft landing problem modelled through stochastic programming with learning-driven arrival time predictions. *Transportation Research Part E: Logistics and Transportation Review*. (under 1st review)
- Zhang, C., Ng, **K. K. H.***, & Jin, Z. (2024). Distributionally robust aircraft sequencing and scheduling in single mixed-operation runway with learning-driven landing and take-off time predictions. *Transportation Research Part E: Logistics and Transportation Review*. (under 1st review)
- Zhang, C., Ng, **K. K. H.***, Jin, Z., & Zhu, C. (2024). Stochastic programming approaches for the terminal airspace traffic scheduling and operations with learning-driven aircraft arrival time predictions. *Transportation Research Part C: Emerging Technologies*. (under 1st review)
- Zhu, C., & Ng, K. K. H. (2024). An integrated reinforcement learning framework for multi-aircraft trajectory optimisation under dynamic weather hazards. *Transportation Research Part E: Logistics and Transportation Review*. (under 1st review)